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Notice of Allowability	Application No.	Applicant(s)	
	10/697,488	YAMADA ET AL.	
	Examiner	Art Unit	
	Filip Zec	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Terminal Disclaimer filed on 7/21/2005.
2. ☒ The allowed claim(s) is/are 1-19.
3. ☒ The drawings filed on 30 October 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
|---|--|

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance: the prior art does not anticipate nor render obvious the combination set forth in the independent claims, and specifically does not show a refrigerant cycle system comprising a compressor for compressing refrigerant; a first heat-exchanging portion for cooling and condensing gas refrigerant discharged from the compressor by radiating heat; a gas-liquid separator for separating refrigerant into gas refrigerant and liquid refrigerant, into which all of refrigerant after passing through the first heat-exchanging portion is introduced; a second heat-exchanging portion disposed downstream of the first heat-exchanging portion, for cooling and condensing refrigerant flowing from the gas-liquid separator by radiating heat; a gas-refrigerant return passage through which gas refrigerant in the gas-liquid separator is introduced into the second heat-exchanging portion; a decompression device disposed downstream of the second heat-exchanging portion, for decompressing refrigerant after passing through the second heat-exchanging portion; an evaporator disposed downstream of the decompression device, for evaporating refrigerant flowing out of the decompression device and a heating unit for adjusting a heating amount of the liquid refrigerant in the gas-liquid separator in accordance with one of a super-heating degree of gas refrigerant discharged from the compressor and a super-heating degree of gas refrigerant at an outlet of the evaporator.

2. U.S. Patent 6,006,532 to Suzuki, Takahisa et al. teaches a refrigerant cycle system, U.S. Patent 6,170,272 to Backman, Thomas John teaches a refrigeration system with inertial subcooling and U.S. Patent 6,438,980 to Sakurai, Takashi et al. teaches a cycle system in a

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refrigerator, structured so as to connect a compressor, a condenser, a liquid receiver and a supercooler in this order, however they do not teach a gas-liquid separator for separating refrigerant into gas refrigerant and liquid refrigerant, into which all of refrigerant after passing through the first heat-exchanging portion is introduced; a heat-exchanging portion disposed downstream of the first heat-exchanging portion for cooling and condensing refrigerant flowing from the gas-liquid separator by radiating heat, a gas-refrigerant return passage through which gas refrigerant in the gas-liquid separator is introduced into the said heat-exchanging portion and a heating unit for adjusting a heating amount of the liquid refrigerant in the gas-liquid separator in accordance with one of a super-heating degree of gas refrigerant discharged from the compressor and a super-heating degree of gas refrigerant at an outlet of the evaporator.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

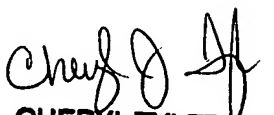
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3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Filip Zec whose telephone number is (571) 272-4815. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Filip Zec
Examiner
Art Unit 3744


CHERYL TYLER
SUPERVISORY PATENT EXAMINER

FZ